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ABSTRACT

The problems of standardized tests with regard to Mexican American students, particularly "ethnic validity", are reviewed. Inadequate norm group representation, cultural bias, and language bias are purported by the author to be the most common faults of standardized tests. Suggested is the elimination of standardized testing as a principal means of individual or minority group oriented educational program assessment. Researchers and educators are reminded that Mexican Americans represent a complex, heterogeneous group affected in varying degrees by mixtures of culture and values and that their unique multivariate socio-cultural and linguistic characteristics must be recognized and accounted for. Alternatives suggested and discussed are: the use of criterion-referenced tests, use of culture free tests, use of "balanced" research and program evaluation methodology, sensitive interpretation of test data when the use of tests is unavoidable, and the development and use of culture-specific and dialect-appropriate measures. (Author/RC)

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Problems and Alternatives in Testing Mexican American Students

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Introduction

The use of standardized tests for individual assessment and as a tool in determining the effectiveness of many eudcational programs is a widely used and accepted practice. However, the effectiveness and utility of using standardized tests with respect to Mexican American students or as primary means of assessing minority group oriented educational programs is highly suspect.

The basic problem of standardized tests as they presently exist and are used among Mexican American students is that they lack "ethnic validity." That is, standardized tests are not "ethnically valid" in that they do not accurately or appropriately account for cultural, linguistic or experiential ethnic differences. The failure to recognize these ethnic differences and understand their causes can only serve to widen the social and theoretical testing controversy in which minority group members remain the indigenous victims.

I believe that substantive progress can be made in the area of testing by subjecting tests to the criteria of "ethnic validity". As a Mexican American, sensitive to the needs of others of the same ethnic, linguistic and cultural background, I believe it is imperative that "ethnically valid" tests be developed, implemented and interpreted which emphasize the positive attributes of Mexican Americans - and other ethnic groups - which have for so long gone unrecognized by existing tests instruments.

The purposes of this paper are, first, to review the problems of standardized tests, and second, to propose alternatives in testing Mexican American students particularly with respect to "ethnic validity". These remarks are based on my experience in working with school districts and educational programs with a high concentration of Mexican American students, and more recently in directing an evaluation of an Experimental Schools Program in San Antonio, Texas.

Criticisms of Standardized Tests

The most common problems in use of standardized tests with respect to Mexican American students are those of: (1) Inadequate norm group representation; (2) cultural bias and (3) language bias.

Norm Group Representation

Most standardized achievement, aptitude, and intelligence tests were normed on an Anglo, English speaking population; hence, the norms are inappropriate for use on Mexican American students who possess different cultural, value and language characteristics (17). The validity of existing norms should be ascertained before they are used for Mexican American students.

The effect of using standardized tests on Mexican American students normed on Anglos has been the lower tests performance by Mexican American students due to culture, value and language variations and consequently has caused the pernicious perpetuation of the belief that Mexican Americans are socially and academically inferior. Educators and researchers, as a whole, have not come to grips with the issue that test instruments, inappropriate test use, and inadequate data interpretation procedures are at fault.

A review of several prominent achievement and mental ability tests reveals no evidence of adequate representation of Mexican American students in the norming group. Instrument designers only assume that minority groups are represented. For example, in the norming of the Tests of Basic Experiences (TOBE), in which twenty-seven schools in five Texas cities participated, there is no evidence of Mexican American representation in proportion to their population.

The expression of concern for representation of Mexican Americans in the norming group, and the need to recognize their cultural and linguistic attributes has existed for some time. In 1934, Sanchez commented that (24):

> ...a test is valid only to the extent that the items of the test are as common to each child tested as they were to the children upon whom the norms were based.

In another study, Carlson and Henderson stated that the predictive validity of tests as a measure of a child's brightness is questionable when that child is not represented in the test group (5).

Garcia has charged that utilizing I.Q. tests normed on Anglo populations represents "a social conspriacy to label particular groups inferior and to propagate the status quo" (9).

One consequence of norming, even more serious than the lack of minority group representation, is the hierarchy of test performance. It has been established that minority group students whether Black, Mexican American, or Puerto Rican, do not score

as high on standardized achievement and mental ability tests as Anglos (26). Indeed, it is not surprising that Anglos perform well on tests developed by Anglos for Anglos and normed on Anglos. There is thus an implied status and hierarchy on test performance based on ethnicity which minority groups regard as a propagation of inherent societal bias.

Budd has also concluded that resistance to the use of more accurate norm-referenced assessment instruments is predicated on the educator's desire for and vested interest in maintaining the existing dominant culture (4). Other research has revealed numerous inherent dangers in using standardized intelligence and achievement tests, normed on different cultural populations, and in using them to evaluate the performance of Mexican American children (1, 22).

Standardized Tests are Culturally Biased

One of the most serious charges against standardized tests is that they are culturally biased. A standardized test must be representative of the group for whom it was intended. Two of the major ability tests, the Stanford-Binet and the Wechsler Intelligence Scale for Children, excluded Blacks, Mexican Americans and Puerto Ricans from the norming sample. If the purpose of standardizing a test is to make it useful for certain reference groups, then the norms for the WISC and Stanford-Binet are invalid for use with Mexican Americans, Blacks, and Puerto Ricans (28).

One effort to overcome the cultural biases of standardized tests when given to Mexican American students is the translation

of test items. For example, the following is a test item which calls for the clearest and best expression to "cut out."

> Mr. Vice president, has the Ambassador from Tangentia cut out?

The alternative expressions are "left?, existed?, shoved off?" or "Best as it is." The translation of alternative expressions would be Se marchó, salió, se largó, and mejor como está respectively. In this case direct translation is of little value since there are no criteria as to what constitutes the clearest or best alternative expression (12). Other researchers have found it necessary to reword many items of the Spanish version of the WISC, the Escala de inteligencia Wechsler para niños, to Spanish words commonly used in the Southwest such as changing bola to pelota and concreto to cemento (6).

In many other cases, translation of test items is not adequate or sufficient since translation may change the content of items, and provides no assurance of actual language representation of the group being tested due to regional colloquial language differences. In addition, many test items are subjective and do not include an "allowable answer" a student might otherwise select. One of the most common causes of unreliability of a standardized test is the inclusion of items which are scored on the basis of subjective judgments and social conventions of middle class Anglos. Some designers of intelligence tests have also expressed that mere inclusion of so called "Mexican American items" on a test will not

make the test any more valid.

One result of this bias is presented by Zigler whose research data suggests that intelligence of lower socio-economic class children tends to be underestimated by conventional intelligence tests (30).

It is also important to note that responses to test items are socially and culturally determined, not grammatically determined. Additionally, correct responses to test items are largely predicated on a experiential projection into the situation in question. Thus, it would be difficult for a Mexican American child to select "toboggan" as "properly" being associated to "snow" rather than selecting "coat" for example.

Standardized tests, if they are to serve the purpose for which they are constructed, appear inherently incapable of accounting for cultural and ethnic variations. Educational testing, despite its statistical refinements, remains a crude measurement. As Stake has noted (25):

> Most "standardized" tests scores tell where an examinee performing "Psychometerically useful" tasks stands with regard to a reference group, rather than the level of competence at which he performs essential scholastic tasks.

What constitutes one's reference group, and how adequately "competence" of Mexican American students is measured by standardized tests are only now beginning to receive serious attention. Criterion referenced measures (CRM's) is being given serious consideration as a way of measuring "competence" in lieu of

standardized tests but the statistical concepts of reliability and validity which hold for normed referenced tests must be re-examined and redefined to fit CRM's.

Language Bias

The implications of language as a factor in testing are obvious: mono-lingual standardized tests are inadequate as a means to assess the intellectual development of Mexican American students. No child can be expected to perform well on a test that is written in a language he cannot understand.

Language, as a carrier of culture and a medium of communication for education, is a particularly important variable in the educational process of Mexican Americans. One survey estimates that first grade Mexican American pupils who do not speak English as well as the average Anglo first grade pupil ranges from 30% in Arizona to a high of 62% in Texas with an average of about 50% for the five Southwestern states (27).

Despite the predominant use of Spanish throughout the Southwest, educators continue to regard Spanish speaking children as educationally "handicapped" and continue the practice of "No Spanish" rules, and punishment for speaking Spanish (27). This practice carries over to testing when only tests in English are used.

Sanchez has charged that many educators continue to regard a foreign home-language as bad and Mexican American children as (23):

> ...ipso facto less than normally intelligent...(which) ...reveals a professional blindspot so elementary that it is difficult not to question the professional competence and integrity of the educators responsible.

Additionally, many educators are unaware of or do not understand the various language forms such as "Tex-Mex", "Pocho", and "barrio Spanish" that are spoken throughout the Southwest.

In some school districts in the Southwest where Spanish is the prominent language, various "language building" programs exist such as English as a Second Language (ESL) and Title VII Bilingual-Bicultural programs but these appear to lack in quantity and quality. ESL programs, originally designed as a transitional language programs, are generally ineffective because they are too limited in scope, invite ethnic segregation and fail to build on a child's existing language skills and socio-cultural attributes. By comparison Title VII programs generally attempt to incorporate a child's language, socio-cultural and positive environmental attributes as a bridge to teaching English. However, the difficulty with "language building" programs is that they do not seriously attempt to develop equal competence in two languages. Additionally, evaluations of such programs often utilize the Stanford-Binet or WISC which lack "ethnic validity" and thus yield biased data.

Palomares notes that standardized tests such as the Stanford-Binet and WISC merely measure what a Mexican American student does not know rather than what he does know (18).

In their investigation of the placement of Mexican American pupils in Educable Mentally Retarded (EMR) classes, Chandler and Plakos found that the I.Q. performance criteria were based on a test which failed to recognize or account for the student's

not understanding English. When students were given the proper opportunity to perform in their Spanish home language, many test performance scores were well above the EMR cut-off level (6).

In a similar study, Mercer concluded that biased I.Q. tests and language difficulties largely account for poor test performance and subsequent labeling of minority children as mentally retarded (16).

It is also noteworthy to mention the recent case of Lau vs Nichols in which the Supreme Court unanimously ruled on the fact that non-English speaking students receive less educational benefits than English speaking children. This suit, involving Chinese children in San Francisco, is expected to have dramatic effects in terms of aiding the bilingual cause for Mexican American students and their struggle for equal educational opportunities (21).

Alternatives in Testing

Standardized tests are at best imprecise measures that more often than not are used in undesirable ways. The emphasis on continued use of standardized tests has restricted, rather than enhanced the educational and social opportunities for Mexican American students.

I suggest the elimination of standardized testing as a principal means of individual or minority group oriented educational program assessment on the basis that such testing is inappropriate and too limited as I have shown. They have not proven to be of substantive benefit to Mexican American students.

Because standardized tests lack "ethnic validity" Mexican American students tend to make low test scores which are equated to "bad" test scores and inherent student deficiency. Consequently use of ethnically invalid tests gives credence to the metaphors of bad self-concepts, lack of motivation and perpetuate a poor social image of Mexican Americans. If tests are to be of any value they must be expanded in scope to encompass or account for linguistic, cultural, experiential and other ethnic group variations.

It is essential that researchers and educators understand that Mexican Americans represent a complex, heterogenous group affected in varying degrees by Mexican American and contemporary Anglo cultures and values and that Mexican Americans possess unique multivariate socio-cultural and linguistic characteristics which must be recognized and accounted for in individual and educational program assessments. Despite the national acceptance of standardized testing there are several alternatives in testing Mexican American students that merit comment. These alternatives include (1) the use of criterion-referenced tests; (2) the use of culture-fair tests; (3) the use of a "balanced" research and program evaluation methodology; (4) the sensitive data interpretation of standardized tests data when use of tests is unavoidable; and (5) the development and use of culture-specific and dialect appropriate measures. These alternatives are discussed below.

Use of Criterion Referenced Measures

In contrast to the use of norm-referenced testing, considerable attention has been focused on the use of criterion-referenced measures (CRM's) as an alternative to traditional testing procedures.

As popularly defined, a criterion-referenced measure assesses the content of a person's behavior in regard to some specified instructional objective without comparison to the performance of others, as is the case of norm-referenced measures (8). Criterion Referenced Measures appear to be a promising assessment alternative for educational practices such as individualized and self-paced instruction since they can more adequately assess that a student's understanding of a concept or rule in contrast to limited sampling of curricular content by a specific response requirement in norm-referenced testing.

The use of CRM's, however, is not without criticism. Edel has discussed the major limitations of CRM's as the lack of the assessment, the difficulty in obtaining specific objectives and the limitations in the scope of CRM's as a measure of educational achievement (7). While CRM's provide information on what one has accomplished, they are not likely to produce information on what an individual or group can do, or may be expected to accomplish. In addition, CRM's lend themselves more adequately to the assessment of such programs as math, but appear less adequate with regard to Social Studies or those areas requiring use of language, written essays and the like.

A major controversy surrounding CRM's has centered on the definition of criteria. The current definitions of CRM's are not adequate, as Jackson has stated, particularly with respect to assessing comprehensive behavior (14). This issue is compounded by the problems of objectivity, reproducibility, and generalizability. In addition, some researchers have noted that statistical methods appropriate to norm-referenced tests are of little or no value to criterion-referenced measures.

Of equal importance is Randell's observation that (20):

> In criterion-referenced measures, difficulty is not a factor of population but a function of development or mastery level which is specified by the curriculum objectives.

Despite these and other difficulties CRM's appear to be an improvement over standardized tests. The issue according to Garvin is not whether to use CRM's, but rather when to use them (10). Similarly, Klein has suggested combining the better elements of both normed and criterion-measures instruments (15). The advisability of utilizing CRM's will of course, depend on one's local circumstances and available resources but they should receive serious consideration. Moreover CRM's can be made to measure cultural differences, which would be one step in the right direction.

Use of Culture-Fair Tests

The recognition of cultural and linguistic variability has led to development of culture-fair tests.

Culture-fair tests, also referred to as culture-free or non-language tests do not require one to know or use language, nor to manipulate two or three-dimensional objects. Rather, culture fair tests attempt to obtain a measure of "intelligence" based on symbolic responses to relationships among figures or designs. The advantage of culture-fair tests is that they minimize dependence on verbal ability. Culture-fair tests have been greatly used for applied research in assessment of low-income, immigrant and so-called "culturally deprived" children.

Attempts to develop "culture-free" and "culture-fair" tests such as the IPAT series, Goodenough-Harris system, and others are not without critics. Several researchers have pointed out that many such tests involve complex categorization of items developed in particular cultural environments (2, 13). Thus, a particular cognitive or perceptual response to a cultural-fair test is not necessarily germane in another culture.

The generalizability and cross-cultural validity of culture-free and culture-fair tests will, of course, require further research to establish cross-cultural conceptual and perceptual calibration. Given the state of the art in cross-cultural testing restandardized for each culturally different group should be made to maximize its reliability. As in the case of CRM's, culture-fair tests offer some distinct advantages and should be considered for use where possible in lieu of standardized tests.

Use of Balanced Research/Evaluation Models

More often than not, educational evaluation models applied to Mexican American oriented programs have been predicated on

assumptions that regard Mexican American culture and values as inferior (3). Negative stereotype, Guzman has charged, are abetted by researchers and educators who "have aborted the ethics of scholarship", and by premature government programs and officials seeking to validate their theories (11).

The use of a multidisciplinary team approach using sociological, and psychological measures offers two major advantages over those employing emphasis on testing. First, the descriptive data have in my experience proven invaluable in the interpretation of the statistical results obtained from standardized test data. This is particularly significant if one considers the socio-cultural and linguistic attributes of Mexican American students. Second, the use of both quantitative and qualitative research and evaluation measures tends to provide more accurate accounting of situations under study.

In addition I seriously believe that concept of "ethnic validity"-cultural, linguistic and experiential relevance - should be incorporated in research and evaluation models and serve as a principle criteria in the selection of tests. Certainly, Anglo researchers have committed serious errors and injustices under the guise of studying Mexican Americans. Consequently, with few exceptions, not much of great consequence exists in the body of legitimate research especially as it relates to Mexican Americans. The concept of "ethnic validity" in which research models, standardized tests and CRM's are subjected to close scrutiny in terms of how well they include items relevant to Mexican Americans can be a step forward in future research.

Improved Standardized Test Administration and Interpretation

In some cases the use of standardized tests if often unavoidable because of external factors. The project staff of the federally sponsored program I am currently involved in evaluating were strongly urged to use the TOBE and CTBS as one of the least biased of available tests by the federal funding agency. Despite some strengths of the TOBE and CTBS there are several major deficiencies: (1) the language subtests in particular appear extremely inappropriate to Mexican American students; (2) some instructions are confusing and misleading; (3) a number of items appear to be biased against lower socio-economic and culturally different students (12). These items should be eliminated or substitutes found which do have "ethnic validity".

In cases where standardized tests are mandated, the situation becomes one of how to best use them (or at least not to perpetuate their deficiencies). The utility of data derived from standardized tests such as the TOBE and CTBS may be maximized by (1) developing local norms in terms of "ethnic validity"; and (2) assessing changes in year-to-year scores rather than comparing test scores with national norms. In addition, careful analysis of test items for colloquial language and experiential relevance is necessary.

When deemed appropriate tests should be administered in the home language of students. In the administration of some instruments for example, it may be necessary to give instructions and conduct testing in English and "Tex-Mex" or "Pocho" Spanish.

Development and Use of Culture-Specific and Dialect Appropriate Measures

The development of culture-specific and dialect-appropriate measures represents a serious and necessary challenge to the educational research community. Such measures offer the distinct advantage of capitalizing on socio-cultural and linguistic attributes of Mexican American students rather than penalizing them as most standardized instruments presently do. For example, if tests are necessary, then the development of bilingual rather than monolingual English or Spanish instruments deserves serious attention. A necessary pre-requisite to the development of bilingual instruments is to conduct language dominance studies to determine language usage and degrees of bilingualism among Mexican American students.

Williams in his development of the BITCH-100 as an alternative to standardized tests exposes the more pervasive problem regarding test usage, that American society is both pluralistic and racist, and suggests that culture-specific and dialect-appropriate tests offer an important alternative to this situation (29). The BITCH-100 illustrates that Black students do well on a test that reflects their social reality. The development and refinement of culture and dialect specific tests represents one important alternative in testing in which minority students have demonstrated good performance.

Summary

I am personally not convinced that use of standardized tests on Mexican American students is either desirable or useful.

All too often Mexican American students are tested and classified by tests designed and normed on Anglo students with little or no regard to ethnic, socio-economic, cultural and language differences. Despite claims to the contrary, the worth of many Mexican American students are implicitly and negatively determined by tests performance. As a consequence, Mexican Americans are shunted into "special" and non-academic classes which in turn results in limited economic and social opportunities.

The pervasive misuse of tests, and conclusions drawn from them have only served to perpetuate the notion that Mexican Americans are somehow educationally deficient. The uncritical use of tests data camouflaged by metaphors of "cultural deprivation" and "linguistically handicapped" cannot absolve test users from the fact that they as well as educational institutions have failed. To conclude from standardized test data that Mexican American students possess less intelligence or ability is gratuitous and offensive to basic human dignity.

Because standardized tests are not "ethnically valid" their potential use among minority populations is limited particularly because of cultural and linguistic factors. Educators and researchers alike who are responsible for testing of Mexican American students would be wise to consider the negative implications derived from use of ethnically invalid standardized tests. Where testing is required, tests should be subjected to the criteria of "ethnic validity."

I have defined the problems in testing Mexican American students as the tests themselves in that they contain little or

no provision to account of ethnic group variations. I submit that the broader social implications and effects of testing beg attention. It is the responsibility of researchers, educators, and professional organizations such as AERA and APA to right the balance of testing. Alternatives that warrant serious attention is the concept of "ethnic validity"-linguistic, cultural and experiential relevance. Other alternatives in testing Mexican American students are use of criterion referenced and culture-fair tests, use of a balanced research/evaluation model, improved test administration procedures, sensitive data interpretation, and development of culture and dialect specific measures.

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